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U. S. DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
FOREST INSECT INVESTIGATIONS

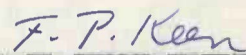
BARK BEETLE SURVEY
SEQUOIA-KINGS CANYON NATIONAL PARK
Season of 1947

Submitted by



G. H. Struble, Entomologist

Approved by


F. P. Keen, In Charge

Forest Insect Laboratory
341 Giannini Hall, U.C.
Berkeley 4, California

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Forest Insect Laboratory
341 Giannini Hall, U. C.
Berkeley 4, California

February 5, 1948

Major O. A. Tomlinson
Regional Director
National Park Service
180 New Montgomery Street
San Francisco 5, California

Dear Major Tomlinson:

Enclosed is a short report by George R. Struble of this laboratory covering the forest insect conditions found in the Sequoia-Kings Canyon National Park through a survey conducted last October.

In general, forest conditions are much improved over those of last year, particularly as regards the situation in General Grant Grove where control work was conducted.

No special control work is needed at the present time, but we believe that a policy of maintenance control should be continued as in the past.

A copy of this memorandum is being sent directly to the Park Superintendent.

Sincerely yours,

F. P. Keen
Entomologist, In Charge

cc: E.T. Sooyan
F.C.C.

BARK BEETLE SURVEY -- SEQUOIA-KINGS CANYON NATIONAL PARK

SEASON OF 1947

by

George R. Struble

BARK BEETLE INFESTATIONS 1946

A sporadic outbreak of the mountain pine beetle in General Grant Grove and adjacent National Forest areas presented the only serious insect situation in the park areas during 1946. In the Kings Canyon recreational zone at Cedar Grove persistent killing of scattered ponderosa pines was also in evidence. Elsewhere low endemic conditions prevailed in the principal timbered zones. Control work by the fell-peel-burn method was recommended for the Grant Grove area during the early spring months.

FIELD EXAMINATION 1947

The 1947 ground survey and reconnaissance of forest insect conditions in National Park timbered areas was made between October 7 and 9 by C. E. Johnson, forester National Park Service, John Van Akkeren, Forest Service, and G. R. Struble, Bureau of Entomology and Plant Quarantine. The principal areas in the mixed conifer type between 4,500 and 7,000 feet elevation from Cedar Grove in the Kings Canyon to Giant Forest were included in the examination. Estimates of infestations generally throughout these areas were determined from 8 roadside plots and from lookout viewing points.

CURRENT LOSSES AND TRENDS

The killing by bark beetles this year generally was less than a year ago. The situation in General Grant Grove was greatly improved as a result of the insect control work undertaken during the spring months. Some persistent attacks of the western pine beetle in the Cedar Grove area accounted for moderate losses there. Losses in white and red fir by the fir engraver beetle and Sierra fir borer were much reduced over a year ago. There appeared to be an upward trend in mountain pine beetle activity in lodgepole pine.

THE SITUATION BY AREAS

Cedar Grove. Insect infestations in this area were definitely downward from 1946, but bark beetle losses, particularly by the western pine beetle, are still sustained within the ponderosa pine stands. Two roadside plots, aggregating 205 acres revealed 5 killed ponderosa pines and

2 sugar pines with a total volume of 12,870 feet b.m. This loss is considerably less than 1946 when 15 trees (1 sugar pine) aggregated 52,160 feet b.m. The infested trees throughout this area were scattered in distribution, most of them having been killed by summer attacks.

Grant Grove. A marked reduction in infestations was found in the Grant Grove area, amounting to approximately 90 percent of the 1946 outbreak. Roadside plots and strips totalling about 400 acres revealed only one summer killed sugar pine as compared to 14 killed trees in 1946 in the same area. This sudden reduction in infestation is attributed to the effectiveness of direct control work which was undertaken during April and May, 1946.

Redwood Mountain-Woodward-Stony Creek.

Low endemic infestations amounting to less than 5 trees per section in the ponderosa pine, sugar pine, and Jeffrey pine types along the General Highway prevailed through these areas. In the lodgepole pine stands, particularly in the Stony Creek area there was some activity of the mountain pine beetle which resulted in killing of several small sized scattered groups of trees.

Giant Forest-Marble Fork.

Three roadside plots through these areas, sampling 130 acres in Giant Forest and 100 acres along the Colony Mill Point road revealed only 2 killed sugar pines, one of which was a pole-sized tree. This loss was even less than a year ago when low endemic conditions were prevalent.

RECOMMENDATIONS

The bark beetle losses in the park generally are not serious. No control work is recommended except in highly used recreational areas where maintenance control work should be carried on as in the past. Areas in this category include Cedar Grove, Grant Grove, and Giant Forest. The lodgepole stands, particularly at Stony Creek and Lodgepole Camp should be watched closely for any further aggressive attacks by the mountain pine beetle.